ABSTRACT

This invention enhances the usability of the human-computer interface by disclosing a technique for the display of single and multi-generation pop-up controls at a location that best meets the user's criterion of an optimal display location. The technique determines the minimum size of a rectangle capable of displaying the actual or likely maximum size of pop-up controls requested during any given activation of the subsystem that manages display of requested controls. The invention then identifies a location that assures the said rectangle either has no overlay or a minimum overlay of the screen area of current interest to the user while avoiding display clipping. A fixed-point is now determined within said rectangle based on physical characteristics of the controls to be displayed that permits display of descendant controls in a backward cascade that enables the user to maintain visual focus at a fixed screen location while manipulating successive controls. The invention provides the user with the ability to redisplay any previously displayed control irrespective of control type as well as provide a "Done" capability for appropriately designed controls that permits the user to convert a single selection control into a multi-selection control. As an adjunct to the reverse order the invention provides four capabilities that permit the user to undo and redo arbitrary services via performed via redisplay of ancestor controls.